

Customer No.: 31561
Docket No.: 8711-US-PA
Application No.: 10/065,750

REMARKS

Present Status of the Application

The Advisory Office Action remains the rejections on claims 1-6 and 8-21 while claims 13-21 have been allowed. Specifically, the Office Action rejected claims 1-6 and 9-11 under 35 U.S.C. 103(a) as being unpatentable over Kluth et al. (U. S. Patent 6,376,341; hereinafter Kluth) in view of Wolf et al. (Silicon Processing; hereinafter Wolf). The Office Action rejected claims 8 and 12 under 35 U.S.C. 103(a) as being unpatentable over Kluth in view of Wolf and Randolph et al. (U. S. Patent 6,538, 270; hereinafter Randolph). Applicants have amended independent claim 1 and added dependent claim 22. Claims 1-6 and 8-22 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Office Action Rejections

Applicants appreciate that claims 13-21 have been allowed.

The Advisory Office Action remains the rejections on claim 1 because the thickness of the masking layer does not produce unexpected results. Applicants respectfully traverse the rejections for at least the reasons set forth below.

As shown in FIG. 2C, the protective layer 210 is formed on the top oxide layer 206 of the ONO layer 208. The protective layer 210 with the ONO layer 208 are patterned to expose the substrate. In other words, the protective layer 210 is to protect the top oxide layer of the ONO 208 during the patterning process (see descriptions for FIG. 2C). *In this situation, the*

Customer No.: 31561
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protective layer 210 is not necessary to be very thick, such as 50 angstroms, as recited in claim 22, while the top oxide layer can be protected during etching. In other words, the protective layer and the ONO layer are together patterned by lithographic and etching processes. The protective layer can protect the top oxide layer during the etching process.

Even further, the protective layer is not absolutely necessary to be used as the implantation mask to form the doped region in the substrate 200 (see FIG. 2D).

In re Kluth, the mask layer 34 is individually formed on the top oxide layer 30. The mask layer 34 is used as the mask for implantation (see Figs. 3-5), then is continuously used as the mask for etching the ONO layer (see Fig. 6). *In other words, the mask layer has to be sufficiently thick (col 5, lines 50-53) to serve as the implantation mask and the etching mask.*

Kluth does not teach the features as recited in independent claim 1 of the present invention.

Wolf does not teach the specific protection layer when considering the invention as a whole either.

Furthermore in considering the rules in MPEP, the prima facie conclusion of obviousness is not successfully set up.

According to MPEP 2142, the examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

According to MPEP 2144.05, a prima facie case of obviousness may also be rebutted by

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Application No.: 10/065,750

showing that the art, in any material respect, teaches away from the claimed invention. According to MPEP 2145 X, D, 2: it is improper to combine references where the references teach away from their combination.

Applicants believe that the prior references do not contain any suggestion (express or implied) that they can be combined, or that they can be combined in the manner suggested. There is no motivation to combine prior art references to solve the problem in this invention. The examiner's conclusion of obviousness is based on improper hindsight reasoning.

Also and, the references themselves teach away (expressly or by implication) from the suggested combination. There is no motivation to combine prior art references to solve the problem in this invention. The ordinary skill in the art will not combine reference to get this claimed invention.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1 and 13 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claims 2-6, 8-12, and 14-22 patently define over the prior art references as well.

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CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-6 and 8-22 of the invention patentably define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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